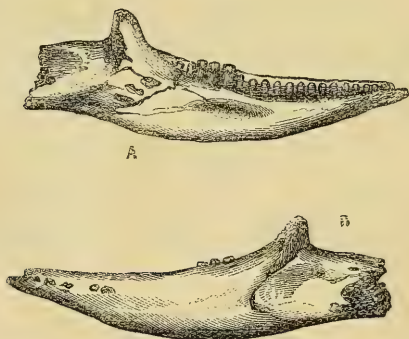


Notice of two large Extinct Lizards, formerly inhabiting the Mascarene Islands. By Dr. A. GÜNTHER, F.R.S., F.L.S., Keeper of the Zoological Department, British Museum.

[Read March 15, 1877.]

I.—DURING an examination of remains of Birds and Chelonians from the Mauritius, especially the Mare aux Songes, the locality famous for its yield of Dodo-bones, I recognized in some fragments parts of the skeleton of a Lizard. They were not numerous, and consisted of a short fragment (with three teeth) of the maxilla, five fragments of the mandible, seven more or less perfect femurs, and portions of three humeri. Some had been collected by Mr. Edward Newton, to whom science is so much indebted for the better acquaintance with the extinct fauna of the Mascarenes, others by Mr. H. H. Slater, one of the naturalists accompanying the “Transit-of-Venus” Expedition.

Fig. 1.



Imperfect mandible of *Didosaurus mauritianus*, Günther, of natural size.

A, the internal, and B, the external surface.

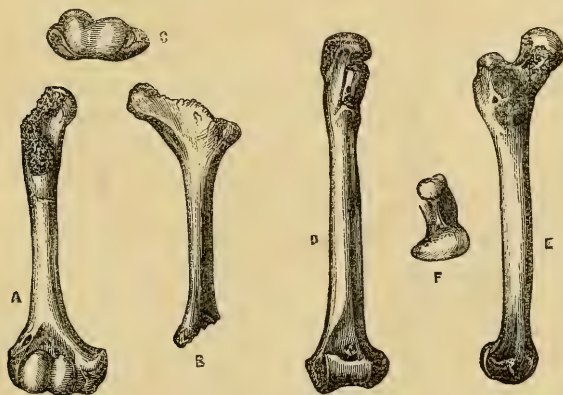
The mandible is an extremely solid and thick bone, with Pleurodont dentition, and with the alveolar edges far apart. In the least fragmentary example the entire dentary and part of the articular have been preserved; but the articular surface has been broken away, so that we remain ignorant as to the form of the joint and the part behind it. The *dentary* is 37 millims. long, 12 millims. high behind, and 7 millims. thick in its middle. Its outer surface is very convex, smooth, perforated in its anterior half by a series of five foramina mentalia. It rapidly tapers in front, and is moderately deeply cleft behind for the reception of the articular

bone. The junction between the two bones is very close, without vacuity or foramen on the outer surface. The *splénial* consists of two pieces, the anterior fitting into the deep inner notch of the dentary, participating in the formation of the inner foramen; the posterior piece is small, and, barely touching the dentary, lies along the lower side of the articular; it terminates anteriorly in the perpendicular from the coronoid process. The *coronoid* is small, its process not quite vertical to the longitudinal axis of the mandible.

The *teeth* were closely set, small, about 24 in number; the anterior were probably conical and pointed, but the posterior, of which several are preserved, have very obtuse summits.

Shafts of three *humeri* have been preserved, one with the distal end complete, and another with a portion of the proximal extremity. This bone does not appear to differ from the type of other Pleurodont lizards. It is about 39 millims. long, with a thin and slightly compressed shaft, with the ulnar tuberosity dilated and much projecting, and with the radial margin compressed into

Fig. 2.



Different aspects of (A, B, C) the imperfect humerus and (D, E, F) a perfect femur of *Didosaurus mauritianus*. All of natural dimensions.

a sharp edge above the condyle; the supracondylar foramen perforates this sharp edge, just above the condyle. The distal extremity is $13\frac{1}{2}$ millims. broad.

The specimens of *femur* are nearly of the same length (46 millims.), but some have a somewhat stouter shaft than others. The

is much stouter than that of the humerus. Also this bone shows no deviation from the ordinary Lacertian type.

The bones before us are sufficient to give an idea of the size of this Lizard; by comparing them with the skeletons of a Monitor and of a large Scincoid, I infer that the Lizard of Mauritius must have had a body of between 14 and 15 inches in length, the tail not included.

The question as to its affinities is much less easily answered, the peculiarities of the mandible being apparently rather generic, and not indicative of a family type, and the leg-bones being of too general a type to be of much use in the solution of the problem. The Pleurodont families which can come under our consideration are :—

1. The *Monitoridæ*, which are distinguished by a much smaller number of powerful teeth than we find in the Mauritian Lizard.

2. The *Teidæ* and *Lacertidæ* may be excluded, the former as being confined to the New World, the latter as being composed of species of small size.

3. Among the *Iguanidæ* all the genera approaching the Mauritian species in size are provided with notched teeth.

4. Thus, then, remain the families of *Zonuridæ* and *Scincidæ*, both of which are well represented in the tropical parts of Africa, Madagascar, and even the Mascarene Islands. The dentition of many of them closely resembles that of our Lizard, especially in the obtuse form of the crown of the tooth. Some, like *Zonurus*, *Gerrhosaurus*, and *Cyclodus*, approach the Mauritian form in size. In members of both these families there is a similar disproportion of thickness between humerus and femur, as in our Lizard. Thus it seems very probable that it will ultimately prove to belong to one of these families; but so much appears to be certain, from a comparison of its mandible with those of the other principal generic types, that it is sufficiently distinct to deserve being placed in a separate genus, for which I propose the name *Didosaurus mauritianus*.

II.—Mr. Slater collected in Rodriguez, with remains of the Solitaire and Tortoise, several bones which he recognized as the remains of a Lizard, possibly belonging to the family of Skinks. In my opinion it is a Geckoid Lizard, which, as far as the evidence before us goes, cannot be separated from the genus *Gecko*; but the species from Rodriguez appears to have attained a much larger size than *Gecko verus* (to which it is very similar), or than any

other Geckoid known. Referring, then, this Lizard to the genus mentioned, I concur in Mr. Slater's proposal of naming it after Mr. E. Newton,—*Gecko newtonii*.

The bones collected consist of two parietals, posterior half of right ramus of lower jaw, right humerus, right half of pelvis, five left and two right femurs, and therefore must have belonged to at least five individuals, of which the one indicated by the pelvis was the largest. In the following description these bones have been compared with the skeleton of a *Gecko verus*, the vertebral column of which is 100 millims. long (exclusive of the caudal vertebrae), and the skull 45 millims.

The *parietal* agrees in size and shape entirely with that of *G. verus*, in which the two long processes into which this bone bifurcates behind are separated by a large vacuity from the paroccipital. In *Phelsuma* (which genus is so well represented in these islands and on the coasts of this geographical region, and which might have been expected to occur in Rodriguez) the parietal has quite a different shape (*P. seychellense*), and its posterior processes are adpressed to the paroccipital.

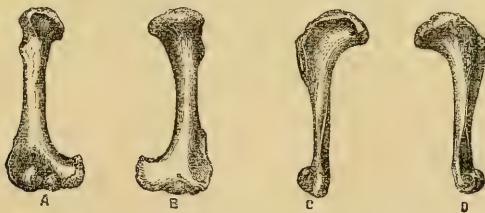
Fig. 3.



Parietal bone of *Gecko newtonii*.
Upper aspect,
and of natural
size.

The *articulary* piece of the mandible differs nowise from that of *G. verus*; like the latter it is produced behind the condyle into a hamate grooved process, which, however, is much more concave on its upper surface in the Rodriguez species than in *G. verus*.

Fig. 4.



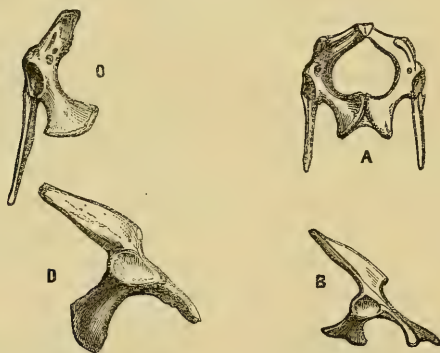
Humerus of *Gecko newtonii*, nat. size. A, anterior, B, posterior, C, ulnar, and D, radial aspects of bone.

The *humerus* offers a more striking difference from *G. verus* than the preceding bones; it is much stronger, and especially its extremities are comparatively much more dilated. Its head is transversely elongated, passing into a curved and projecting prominence, which answers to the ulnar tuberosity. The radial

crest is strongly developed, and does not extend beyond the proximal third of the length of the bone. The transverse diameter of the distal extremity is nearly rectangular to that of the proximal. The whole of this part of the bone is much dilated, particularly by a broad trenchant crest running along the radial border of the bone. Of the two condyles the radial one is much the more prominent one and projects towards the anterior side of the bone. In all these particulars *G. newtonii* resembles *G. verus*, all the ridges and prominences being, however, much more developed.

	<i>G. verus.</i> millims.	<i>G. newtonii.</i> millims.
Length of the humerus	22 $\frac{1}{2}$	25
Least width of the shaft	2	3
Transverse diameter of proximal end	5 $\frac{1}{2}$	9
Transverse diameter of distal end	6 $\frac{1}{2}$	10

Fig. 5.



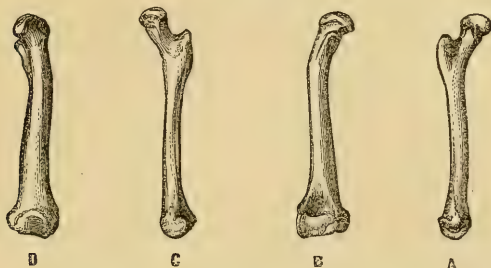
A. Inferior surface of the pelvis of *Gecko verus*. B. The outer aspect of the right os innominatum of the same animal. C. Lower surface of the right half of the pelvis of *G. newtonii*, and D, its exterior surface. All the figures are of natural size.

The *pelvis* and *femur* are so similar to those of *G. verus* that the accompanying figures and statements of measurements will suffice to give a perfect idea of those bones.

	<i>G. verus.</i> millims.	<i>G. newtonii.</i> millims.
Length of the os ilium (from acetabulum)...	11	13
Greatest width of os ilium (from acetabulum)	4	5 $\frac{1}{2}$
Length of os pubis (from acetabulum)	11	(injured)
Width of os pubis at its base	3	5 $\frac{1}{2}$
Length of os ischii (from acetabulum)	6 $\frac{1}{2}$	11

	<i>G. newtonii</i> . millims.	<i>G. verus</i> . millims.
Least width of os ischii	2½	11
Length of femur	26	30
Width in the middle	1½	3
Width of its lower extremity	5½	7½

Fig. 6.

The femur of *Gecko newtonii* in four different aspects and of natural dimension.

On *Myodes lemmus* in Norway. By ROBERT COLLETT, Conservator University Museum, Christiania, C.M.Z.S., &c. (Communicated by Dr. J. MURIE.)

[Read April 5, 1877.]

IN the previous year's publications of this Society are some articles by Mr. Duppa Crotch on the Norwegian Lemming (*Myodes lemmus*)*. As the habits and the economy of this mysterious little animal must always have considerable interest for any one who has the opportunity of observing it in the state of nature, I have considered that a few remarks on the same subject, being the result of personal experience, may be deemed worthy of notice, more especially as my personal observations in some respects differ from the statements made by Mr. Crotch. The following notes with some additions and abbreviations may be considered in the light of a partial translation of an article of mine in a memoir on the mammals of Norway, published in Christiania, March 1876†, and are here communicated by the desire of my friend Dr. Murie.

* 1. "On the Migration and Habits of the Norwegian Lemming," vol. xiii. p. 27 (Sept. 19, 1876). 2. "Additional Note relative to the Norwegian Lemming," vol. xiii. p. 83 (Dec. 15, 1876). 3. "Further Remarks on the Lemming," vol. xiii. p. 157 (Feb. 28, 1877).

† "Bemærkninger til Norges Pattedyrfauna," p. 18 (Nyt Magazin for Naturvidenskaberne, 22 B., Kristiania, 1876).